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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,724	10/26/2001	Hans H. Haraldsted		8806

7590 07/28/2003  
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EXAMINER

CONLEY, SEAN E

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 07/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/889,724

Applicant(s)

HARALDSTED, HANS H.

Examiner

Sean E Conley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

### **DETAILED ACTION**

1. An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

Applicant is advised of the availability of the publication "Attorneys and Agents Registered to Practice Before the U.S. Patent and Trademark Office." This publication is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. The claims 1-6 are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

4. Claims 1-6 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

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The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

5. Regarding claim 2, the phrase "as an example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

6. Regarding claim 6, the phrase "or in a like embodiment or shape" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described, as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steenstrup (U.S. Pat. 4,302,112) in view of Massa (U.S. Pat. 4,909,266) and further in view of the applicant's admitted state of the prior art.

Steenstrup teaches a process for continuous homogenization or emulsification of liquids and an ultrasonic apparatus for carrying out the process. The apparatus includes an ultrasonic chamber with lamellas that mix and stir the fluid. The apparatus further includes ultrasonic transducers which cause cavitation in the fluid flowing through the chamber (see figures 1-5 and column 3, lines 25-60). However, Steenstrup does not teach lamellas placed on the outer edge or wall of the chamber or ultrasound transducers that drive or work in a displaced succession.

The applicant has admitted that the prior art, specifically German patent no. 14.44.377, teaches that it is known to mount lamellas directly on the outer wall for bettering a mechanical stirring (see page 1, lines 27-29). Therefore, it would have been obvious to one of ordinary level of skill in the art at the time the invention was made to modify Steenstrup to include lamellas on the outer edge or wall of the chamber

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as taught by the applicant's admitted state of the prior art in order to improve the mechanical stirring inside the chamber.

Massa discloses an improved ultrasonic cleaning system which employs a plurality of ultrasonic transducers. The apparatus includes a switching system that applies electrical power selectively, sequentially and intermittently to any specified one or more of the plurality of ultrasonic transducers in order to achieve substantially increased cavitation intensity levels in the cleaning liquid (see abstract and column 1, lines 21-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Steenstrup to include a switching system that selectively, sequentially and intermittently operates any specified one or more of the plurality of ultrasonic transducers as taught by Massa in order to achieve substantially increased cavitation intensity levels in the liquid being homogenized or emulsified.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steenstrup in view of Massa and further in view of the applicant's disclosure as applied to claim 1 above, and still further in view of WO 94/04265.

Steenstrup and Massa do not specifically recite the frequency range of the ultrasonic transducers used for homogenizing.

WO 94/04265 discloses a method of homogenizing a liquid using an ultrasonic transducer that transmits frequencies from 20-100 kHz (see abstract and claim 1).

Therefore, it would have been obvious to one of ordinary level of skill in the art at the time the invention was made to further modify the invention of Steenstrup and operate the ultrasonic transducers in a frequency range of 20-100 kHz as taught by WO 94/04265 in order to cause cavitation in the liquid that is too be continuously homogenized.

11. Claims 4 and 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steenstrup in view of Massa and further in view of the applicant's disclosure as applied to claim 1 above, and still further in view of Lennox, III (U.S. Pat. 5,104,232).

Steenstrup and Massa do not teach or disclose a lamella placed on the outer edge or wall in the mixing chamber which rotates or stirs. Additionally, Steenstrup and Massa do not teach a lamella that is twisted or made in the shape of a spiral.

Lennox, III teaches a rotating tumble mixer that comprises vanes placed on the outer edge or wall of the chamber that are twisted and made into the shape of a spiral (see figure 2, column 3, lines 50-55).

Therefore, it would have been obvious to one of ordinary level of skill in the art at the time the invention was made to further modify the invention of Steenstrup and replace the stationary lamellas on the outer edge wall with lamellas attached to a wall that rotates and furthermore, use lamellas that or twisted and spiral shaped as taught by Lennox, III in order to increase the effect of the cavitation on the fluid.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Conley, whose telephone number is (703) 305-2430. The examiner can normally be reached on Monday-Friday 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Robert Warden, can be reached at (703) 308-2920. The Unofficial fax phone number for this group is (703) 305-7719. The Official fax phone number for this Group is (703) 872-9310.

When filing a FAX in Technology Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of the application. This will expedite the processing of your papers.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [robert.warden@uspto.gov]. All Internet e-mail communications will be made of record in the application file. PTO employees will not communicate with applicant via internet e-mail where sensitive data will be exchanged or where there exists a possibility that sensitive data could be identified unless there is of record express waiver of the confidentiality requirements under 35 U.S.C. 122 by the applicant. See the Interim Internet Usage Policy published by the Patent and Trademark Office Official Gazette on February 25, 1997 at 1195 OG 89.



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Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist, whose telephone number is (703) 308-0661.

SEC *Ac*

June 24, 2003

*Robert J. Warden, Sr.*

ROBERT J. WARDEN, SR.  
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